

Table 1. Demographic characteristics of the study population	
Age (years)	Mean (SD)
Male	55.2 (10.5)
Female	56.8 (11.2)
Education (years)	Mean (SD)
Male	12.5 (2.1)
Female	12.3 (2.0)
Marital status	
Married	78%
Divorced	12%
Widowed	10%
Single	2%
Occupation	
Professional	35%
Managerial	25%
Technical	20%
Service	15%
Unemployed	5%
Retired	2%
Health status	
Good	65%
Fair	25%
Poor	10%
Chronic diseases	
Hypertension	45%
Diabetes	30%
Heart disease	20%
Stroke	15%
Arthritis	10%
Chronic kidney disease	5%
Chronic lung disease	3%
Chronic liver disease	2%
Chronic mental health	1%
Chronic pain	1%
Chronic infection	1%
Chronic cancer	1%
Chronic autoimmune	1%
Chronic endocrine	1%
Chronic hematologic	1%
Chronic immunologic	1%
Chronic neurologic	1%
Chronic sensory	1%
Chronic speech	1%
Chronic vision	1%
Chronic hearing	1%
Chronic taste	1%
Chronic smell	1%
Chronic touch	1%
Chronic pain	1%
Chronic temperature	1%
Chronic pressure	1%
Chronic vibration	1%
Chronic motion	1%
Chronic position	1%
Chronic orientation	1%
Chronic awareness	1%
Chronic memory	1%
Chronic attention	1%
Chronic reasoning	1%
Chronic problem-solving	1%
Chronic decision-making	1%
Chronic planning	1%
Chronic organization	1%
Chronic management	1%
Chronic leadership	1%
Chronic communication	1%
Chronic collaboration	1%
Chronic teamwork	1%
Chronic conflict-resolution	1%
Chronic negotiation	1%
Chronic persuasion	1%
Chronic influence	1%
Chronic power	1%
Chronic authority	1%
Chronic responsibility	1%
Chronic accountability	1%
Chronic transparency	1%
Chronic integrity	1%
Chronic honesty	1%
Chronic truthfulness	1%
Chronic fairness	1%
Chronic justice	1%
Chronic equity	1%
Chronic balance	1%
Chronic harmony	1%
Chronic peace	1%
Chronic love	1%
Chronic compassion	1%
Chronic empathy	1%
Chronic sympathy	1%
Chronic kindness	1%
Chronic generosity	1%
Chronic giving	1%
Chronic sharing	1%
Chronic cooperation	1%
Chronic participation	1%
Chronic involvement	1%
Chronic engagement	1%
Chronic commitment	1%
Chronic dedication	1%
Chronic devotion	1%
Chronic loyalty	1%
Chronic fidelity	1%
Chronic faithfulness	1%
Chronic trustworthiness	1%
Chronic reliability	1%
Chronic dependability	1%
Chronic predictability	1%
Chronic consistency	1%
Chronic uniformity	1%
Chronic regularity	1%
Chronic orderliness	1%
Chronic neatness	1%
Chronic cleanliness	1%
Chronic tidiness	1%
Chronic organization	1%
Chronic management	1%
Chronic leadership	1%
Chronic communication	1%
Chronic collaboration	1%
Chronic teamwork	1%
Chronic conflict-resolution	1%
Chronic negotiation	1%
Chronic persuasion	1%
Chronic influence	1%
Chronic power	1%
Chronic authority	1%
Chronic responsibility	1%
Chronic accountability	1%
Chronic transparency	1%
Chronic integrity	1%
Chronic honesty	1%
Chronic truthfulness	1%
Chronic fairness	1%
Chronic justice	1%
Chronic equity	1%
Chronic balance	1%
Chronic harmony	1%
Chronic peace	1%
Chronic love	1%
Chronic compassion	1%
Chronic empathy	1%
Chronic sympathy	1%
Chronic kindness	1%
Chronic generosity	1%
Chronic giving	1%
Chronic sharing	1%
Chronic cooperation	1%
Chronic participation	1%
Chronic involvement	1%
Chronic engagement	1%
Chronic commitment	1%
Chronic dedication	1%
Chronic devotion	1%
Chronic loyalty	1%
Chronic fidelity	1%
Chronic faithfulness	1%
Chronic trustworthiness	1%
Chronic reliability	1%
Chronic dependability	1%
Chronic predictability	1%
Chronic consistency	1%
Chronic uniformity	1%
Chronic regularity	1%
Chronic orderliness	1%
Chronic neatness	1%
Chronic cleanliness	1%
Chronic tidiness	1%
Chronic organization	1%
Chronic management	1%
Chronic leadership	1%
Chronic communication	1%
Chronic collaboration	1%
Chronic teamwork	1%
Chronic conflict-resolution	1%
Chronic negotiation	

- SEQ ID NO:1

3. A DNA molecule according to claim 1 having the sequence: (I) in Fig. 1.

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5. A DNA molecule according to claim 1 having the sequence: (III) in Fig. 1.

6. A DNA molecule according to claim 1 having the sequence: (IV) in Fig. 1.

7. A DNA molecule according to claim 1 having the sequence: (V) in Fig. 1.

8. A DNA molecule according to claim 1 having the sequence: (VI) in Fig. 1.

9. A DNA molecule according to claim 1 having the sequence: (VII) in Fig. 1.

10. A DNA sequence according to claim 1 encoding the heptahelix receptor polypeptide expressed by a microorganism selected from the group consisting of yeast, bacteria, and eukaryotic cells.

11. A recombinant vector comprising an expression vector containing a DNA molecule as claimed in any one of claims 1 to 10.

12. A host cell transduced or transfected with a vector as claimed in claim 12.

13. A method of making heptahelix receptor, which comprises providing a host cell comprising an expression vector containing the DNA molecule of claim 1, and expressing said DNA to produce said receptor.

14. A method according to claim 16, which comprises recovering the heptahelix receptor.

15. A method according to claim 16, wherein the host cell is a bacterium or yeast.

16. A heptahelix receptor having the sequence:

1	MNTTSSAAPP	SLGVEFISLLAIILL	SVALAVGLPGNSFVV	43
41	WSILKRMQKRS	VTALMVLNLALADL	AVLLTAPFFFLHFLAQ	83
81	GTWSFGLAGCRL	CHYVCGVSMYASVLL	ITAMSLDRSLAVA	123
121	RPFVSQKLRTK	AMARRVL	AGIWLVSFLLATPVLAYRTVVP	163
161	WKTNMSLCFPR	YPSEGHRAFH	LIFEAVTGFLLPFLAVVAS	203
201	YSDIGRRLQARR	FRSRRTGR	LVVLIILTFAAF	243
241	NLAEARRALAG	QAAGLGLVGKRL	SLARNVLI	283
281	NPVLYACAGG	LLRSAGVGVAK	LLEG	323
321	LGQTARSGPA	ALEPGPSES	LTASSPLKLNELN (SEQ ID NO:2)	352

17. A fragment of heptahelix receptor comprising up to about 100 consecutive amino acid residues in Fig. 1 and containing Asn-2.

18. A fragment of heptahelix receptor comprising up to about 100 consecutive amino acid residues in Fig. 1 and containing Asn-164.

19. A fragment of heptahelix receptor comprising up to about 200 consecutive amino acid residues in Fig. 1 and containing Cys-90 and Cys-168.

20. A fragment of heptahelix receptor selected from the group consisting of DNA molecules having the sequences (I), (II), (III), (IV), (V), (VI), and (VII) in Fig. 1.

21. A method of detecting Burkitt's lymphoma, wherein the method comprises providing disrupted human cells, contacting the

cells with DNA as claimed in claim 1, and detecting a hybrid containing said DNA.

22. An antibody that specifically recognizes the heptahelix receptor as claimed in claim 16.

23. The antibody as claimed in claim 22, which is a monoclonal antibody.

24. A method of detecting Burkitt's lymphoma, wherein the method comprises providing human cells, contacting the cells with the antibody as claimed in claim 22, and detecting immunological complex containing said antibody.

25. A method for lowering the level of active leukotriene B4 in a mammal in need thereof, which comprises administering to said mammal a leukotriene B4-lowering amount of a receptor comprising the sequence of amino acids of SEQ ID NO:2.

26. A method for lowering the level of active leukotriene B4 in a mammal having inflammation, which comprises administering to said mammal a leukotriene B4-lowering amount of a leukotriene B4 receptor comprising the sequence of amino acids of SEQ ID NO:2.

27. A method for lowering the level of active leukotriene B4 in a mammal having bronchoconstriction, which comprises administering to said mammal a leukotriene B4-lowering amount of a leukotriene B4 receptor comprising the sequence of amino acids of SEQ ID NO:2.

28. A method for lowering the level of active leukotriene B₄ in a mammal having arthritis, which comprises administering to said mammal a leukotriene B₄-lowering amount of a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2.

29. A method of treating a human to inhibit tissue injury accompanying inflammation resulting from leukocyte activity induced by LTB₄ produced in response to an inflammatory stimulus in the human, wherein the method comprises administering to said human a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2 in an amount sufficient to inhibit activity of human leukotriene B₄ on polymorphonuclear leukocytes or monocytes in said human to thereby inhibit said tissue injury.

30. A method of treating a human to inhibit tissue injury accompanying inflammation resulting from leukocyte activity induced by LTB₄ produced in response to an inflammatory stimulus in the human, wherein the method comprises administering to said human a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2 in an amount sufficient to modulate the inflammatory effect of leukotriene B₄ on polymorphonuclear leukocytes or monocytes by counteracting cell movement induced by LTB₄ in said human.

31. A method of treating a human to inhibit tissue injury accompanying inflammation resulting from leukocyte activity induced by LTB₄ produced in response to an inflammatory stimulus

in the human, wherein the method comprises administering to said human a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2 in an amount sufficient to inhibit the stimulatory effect of leukotriene B₄ on adherence of polymorphonuclear leukocytes or monocytes in said human to thereby inhibit said tissue injury.

32. A method of treating a human to inhibit tissue injury accompanying inflammation resulting from leukocyte activity induced by LTB₄ produced in response to an inflammatory stimulus in the human, wherein the method comprises administering to said human a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2 in an amount sufficient to inhibit stimulatory effect of leukotriene B₄ on oxidative burst of stimulated polymorphonuclear leukocytes in said human to thereby inhibit said tissue injury.

33. A method of treating a human to inhibit tissue injury accompanying inflammation resulting from leukocyte activity induced by LTB₄ produced in response to an inflammatory stimulus in the human, wherein the method comprises administering to said human a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2 in an amount sufficient to inhibit the stimulatory effect of leukotriene B₄ on degranulation of stimulated polymorphonuclear leukocytes in said human to thereby inhibit said tissue injury.

34. A method of treating a human to inhibit tissue injury accompanying inflammation resulting from leukocyte activity induced by LTB₄ produced in response to an inflammatory stimulus in the human, wherein the method comprises administering to said human a leukotriene B₄ receptor comprising the sequence of amino acids of SEQ ID NO:2 in an amount sufficient to inhibit the effect of leukotriene B₄ on oxidative burst or degranulation of stimulated neutrophils in said human to thereby inhibit said tissue injury.

35. A method for assaying a ligand or an antagonist or agonist for said ligand, wherein the method comprises:

(A) providing a heptahelix receptor as claimed in claim 16 or a fragment thereof comprising a binding domain for the ligand, antagonist, or agonist;

(B) incubating the receptor with a test sample suspected to contain the ligand, antagonist, or agonist; and

(C) detecting binding between the receptor and the ligand, antagonist, or agonist.

36. A method according to claim 35, wherein the receptor is in an external cell membrane of a host cell transfected or transduced with DNA encoding the receptor.

37. A method according to claim 35, wherein binding is detected by intracellular calcium level in the host cell.